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Broome Technical Community College

BINGHAMTON, NEW YORK

CATALOG

1958 – 1959



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SUNY Broome Community College

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CALENDAR 1957-58

FALL TERM

September 3, 1957	9:00 A. M.	Senior Registration and Start Cooperative Period
	1:00 P. M.	Freshman Registration
September 4, 1957	8:00 A. M.	Classes Begin
November 27, 1957	12:00 Noon	Fall Term Ends
November 29, 1957		Cooperative Period Ends

WINTER TERM

December 2, 1957	8:00 A. M.	Registration and Start Cooperative Period
December 20, 1957	5:00 P. M.	Christmas Recess Begins
January 6, 1958	8:00 A. M.	Christmas Recess Ends
March 6, 1958	5:00 P. M.	Winter Term Ends
March 7, 1958		Cooperative Period Ends

SPRING TERM

March 10, 1958	8:00 A. M.	Registration and Start Cooperative Period
April 3, 1958	5:00 P. M.	Easter Recess Begins
April 8, 1958	8:00 A. M.	Easter Recess Ends
May 29, 1958	5:00 P. M.	Decoration Day Recess Begins
June 2, 1958	8:00 A. M.	Decoration Day Recess Ends
June 5, 1958	5:00 P. M.	Spring Term Ends
June 6, 1958		Cooperative Period Ends
June 7, 1958	2:00 P. M.	Graduation

SUMMER TERM

June 9, 1958	8:00 A. M.	Registration and Start Cooperative Period
July 3, 1958	5:00 P. M.	Independence Day Recess Begins
July 7, 1958	8:00 A. M.	Independence Day Recess Ends
August 28, 1958	5:00 P. M.	Summer Term Ends
August 29, 1958		Cooperative Period Ends

CALENDAR 1958-1959

FALL TERM

September 2, 1958	9:00 A. M.	Senior Registration and Start Cooperative Period
	1:00 P. M.	Freshman Registration
September 3, 1958	8:00 A. M.	Classes Begin
November 26, 1958	12:00 Noon	Fall Term Ends
November 28, 1958		Cooperative Period Ends

WINTER TERM

December 1, 1958	8:00 A. M.	Registration and Start Cooperative Period
December 23, 1958	5:00 P. M.	Christmas Recess Begins
January 5, 1959	8:00 A. M.	Christmas Recess Ends
March 5, 1959	5:00 P. M.	Winter Term Ends
March 6, 1959		Cooperative Period Ends

SPRING TERM

March 9, 1959	8:00 A. M.	Registration and Start Cooperative Period
March 26, 1959	5:00 P. M.	Easter Recess Begins
March 31, 1959	8:00 A. M.	Easter Recess Ends
June 4, 1959	5:00 P. M.	Spring Term Ends
June 5, 1959		Cooperative Period Ends
June 6, 1959	2:00 P. M.	Graduation

SUMMER TERM

June 8, 1959	8:00 A. M.	Registration and Start Cooperative Period
July 2, 1959	5:00 P. M.	Independence Day Recess Begins
July 6, 1959	8:00 A. M.	Independence Day Recess Ends
August 27, 1959	5:00 P. M.	Summer Term Ends
August 28, 1959		Cooperative Period Ends

THE COMMUNITY COLLEGE

Broome Tech is a two-year, co-educational community college, a term that may need explanation. Nation-wide, community or junior colleges have had a remarkable growth in the past 25 years, from less than 7500 students in 1930 to more than 750,000 in 1955. The reason for this expansion may be seen as we look at the nature and purposes of Broome Technical Community College.

1. It seeks to provide educational opportunity for all who can benefit by it. The symbol of the community college is the open door, not the high hurdle. It makes higher education possible for many more high school graduates, including the earnest average student. The Extension Division also makes it possible for adults and employed persons to extend their education.

2. It provides low-cost education. Rising tuition fees are barring many a promising high school graduate from attaining his goal. The relatively small tuition fee at Broome Tech removes the financial barrier for many. Furthermore, by "bringing the college to the people," the student can live at home and save the cost of room and board. Approximately 60% of Broome Tech students live within commuting distance.

3. It is community-centered. This means several things. First, operating costs are met by the contributions of Broome County and other counties from which students may come and by New York State, as well as by student tuition. Second, the curriculums are geared to the needs of the area, and the community shares in the curriculum development by means of advisory committees. The word "Technical" in the college name reflects the industrial character of the Triple Cities. Third, the college is administered by a local Board of Trustees.

4. It is mainly concerned with offering "terminal" education, that is the preparation of young people for permanent employment after graduation. However, graduates in increasing numbers are finding the two years at Broome Tech an excellent foundation for continuing education at a four-year college.

THE CAMPUS

Broome County, an industrial and agricultural area, is in the Southern Tier of New York State. Its industries are largely concentrated in the population centers of Binghamton, Johnson City, Endicott and Vestal, together forming a community well known for its economic stability and community spirit.

The products of the major industries manufacturing shoes, business machines, cameras and photographic supplies, and aircraft trainers and components are known the world over. Smaller industries turn out hundreds of diversified products. The combination of "big town" features with "small town" atmosphere makes the area an ideal one in which to work and live. The college is fortunate in its location and is proud to make its contribution to the community.

The new campus of Broome Technical Community College is located three miles north of Binghamton on U. S. Routes 11 and 12. Here in a suburban setting a \$3,000,000 plant has been constructed to serve the educational needs of the community. The campus consists of six buildings of modern functional design, an athletic field, and ample parking space.

ADMINISTRATION BUILDING—offices, library, business education, general education.

MECHANICAL BUILDING—laboratories, shops, classrooms for mechanical, automotive and construction technology.

GYMNASIUM-STUDENT SERVICE CENTER—gymnasium, cafeteria, book store, student lounge, activities rooms, little theater auditorium.

ELECTRICAL TECHNOLOGY BUILDING—laboratories, shops, classrooms.

SCIENCE BUILDING—laboratories, classrooms for chemical technology, medical office assistants, dental hygiene.

MAINTENANCE BUILDING

GENERAL INFORMATION

Entrance requirements

A candidate seeking admission to the College is expected to have completed a four-year high school course consisting of a minimum of 16 units which have adequately prepared him to pursue a college program.

An applicant must meet the minimum requirements of physical ability required by the occupational field in which he wishes to engage.

He must show evidence of good moral character.

He must be recommended by his high school principal or guidance counselor.

An applicant for a technical curriculum must have completed a minimum of 3 units of high school mathematics, including elementary algebra, plane geometry, and intermediate algebra. It is also recommended that he have completed 2 units of high school science. Chemistry is required for acceptance in Chemical Technology, and physics is recommended for the other curriculums.

NOTE: An applicant who may be deficient in mathematics or science preparation may enroll in the Pre-Technical program described on Page 73.

Length of curriculum

All programs are two years in length. The college year is divided into four terms of approximately thirteen weeks each. Students enrolled in the cooperative work curriculums spend a total of five terms on campus and two terms in industry. Students in the six-term curriculums spend three terms on campus each year.

EXPENSES

TUITION

For New York State residents \$300.00 per year
(payable at the rate of \$100.00 per term)

For out-of-State residents \$600.00 per year
(payable at the rate of \$200.00 per term)

FEES

Student activity \$23.00 per year*
Health \$19.00 per year
Graduation \$10.00**

* The \$10.00 deposit required with the application becomes advance payment on the activity fee if the applicant is accepted.

** This fee is paid at the start of the term preceding graduation.
Any refund of fees is at the option of the College.

BOOKS AND SUPPLIES

Each student provides at his own expense the necessary books and instructional materials. These may be purchased at the Book Store maintained by the Faculty-Student Association for the convenience of the students. The cost varies, depending on the curriculum, from \$30.00 to \$125.00 per year.

BOARD AND ROOM

The cost of board and room for out-of-town students is dependent upon the demands of the student. The average cost varies from \$12.00 to \$20.00 a week.

LIVING ACCOMMODATIONS

The college does not maintain dormitories. Local students of course live at home. Other students are required to live in rooms which have been inspected and approved, or at the Y.M.C.A. or Y.W.C.A. Lists of approved rooms are maintained and students are assisted in finding suitable living quarters.

Opportunities for financial aid

Many young people are denied the advantages of higher education because of the cost. Broome Technical Community College is vitally concerned that all high school graduates who can benefit by the type of education offered may have the chance to do so. Below are listed several opportunities for self-support without the necessity of time-consuming outside work.

COOPERATIVE WORK PROGRAM

In the work-study plan students are placed in jobs related to their major field of study for two separate employment periods. Students are paid the prevailing wage for the job they do. Cooperative students in the technology curriculums average \$1,400 for the two periods.

The program offers other distinct advantages:

1. It is exploratory. The student has a chance to survey and evaluate a number of different jobs within his field.
At the same time he can take stock of his own abilities and interests.
2. It is an opportunity to correlate classroom studies with actual work experience.
3. It is a means of demonstrating the importance of human relations in the work situation.

Cooperative work students are expected to "earn their own way," to perform the duties required without special favor. At the end of each period employers submit a report covering the student's performance. These reports become a part of the student's permanent record.

SCHOLARSHIPS

Recipients of New York State Regents scholarships may use the scholarships to defray their expenses at the college. Scholarships are offered by the following groups: Civic Club of Binghamton, Triple Cities Business and Professional Women's Club, Binghamton Chapter of the National Secretaries' Association and Binghamton Optimist Club. It is anticipated that a number of additional scholarships will be available by September, 1958.

LOANS

A Student Loan Fund has been established by business and industry in this area. Information and application forms may be obtained from the Dean.

Small loans are available to deserving students who are in temporary need of financial assistance.

ACADEMIC STANDARDS

Grading system

GRADE	POINTS PER CREDIT HOUR
A	4
B	3
C	2
D	1
P	0
F	0

A—Outstanding

Exceptional ability. Accomplishment and initiative merit special recognition.

B—Good

Above average in accomplishment and responsibility

C—Satisfactory

Average in accomplishment and responsibility.

D—Fair

Below average in accomplishment and responsibility.

P—Poor

Accomplishment unsatisfactory for honor points but sufficient to form basis for future work.

F—Failing

Accomplishment insufficient to form basis for future work.

Scholastic standing

To remain in satisfactory standing, a student must earn a point average of 1.2 the first term, 1.4 the second term, 1.5 the third term, and 1.5 for each succeeding term until graduation.

In order for a student to remain in good standing he must also demonstrate a mature attitude of interest and cooperation.

Grades are issued at the end of each term. All students doing unsatisfactory work at midterm will be counseled.

Any student who does not maintain this minimum point average in any term is placed on probation for the following "on campus" term.

Honors

At the end of each term students who have earned an average of 3.0 or above are placed on the Honor Roll. Those who have earned 3.5 or better are named to the President's High Honor List.

Dismissal

Students may be considered for dismissal for the following causes: more than one consecutive probationary period, failure to earn a point average of 0.8 the first term, 0.9 the second term, and 1.0 for each succeeding term; irregular attendance; neglect of work or financial obligations; failure to comply with college rules and official notices; conduct unbecoming a student.

Any action leading to the requested withdrawal of a student is taken up by the Executive Committee. A student may be readmitted by favorable action of the Committee. The college reserves the right to be the sole judge in all matters pertaining to dismissal.

Withdrawal

A student compelled to withdraw at any time must immediately notify the Dean's Office and complete the proper termination form. Failure to comply with this regulation will cause the individual to forfeit his right to honorable dismissal and to lose any refund of fees.

Veterans

All full-time curriculums are approved by the Veterans Administration. Those applicants wishing to obtain government educational benefits should consult their nearest veteran agency.

Requirements for graduation

Satisfaction of the college requirements as a regular student.

Completion of all specified subjects and projects for the curriculum in which the student is enrolled.

An honor point total of 7.1 in the five-term curriculums, or 8.6 in the six-term curriculums.

Satisfactory financial standing at the college.

Degree

Students who complete the requirements for graduation in the full-time day curriculums are awarded the degree, Associate in Applied Science.

Placement

Each Department Head is in charge of cooperative and permanent placement for the students in his department. The demand for Broome Tech graduates is consistently greater than the supply, and most seniors have several employment offers from which to choose.

After graduation

Each graduate is entitled to two transcripts of his work completed at the College. One dollar is charged for each additional transcript.

Graduates are eligible for membership in the Broome Tech Alumni Association. Two annual events highlight the Association's Activities: Spring Day, featuring an Alumni-Varsity baseball game and a picnic, and late in November a dinner, election of officers, and an Alumni-Varsity basketball game.

Graduates who are working nearby are urged to take advanced courses offered in the Evening Extension Division.

CO-CURRICULAR ACTIVITIES

The College recognizes that students need the stimulus and diversion of co-curricular activities and that students themselves should originate and carry out a varied and flexible program under faculty supervision. Every student is urged to make his contribution to and derive his benefits from one or more of the following activities.

Student Council

The student governing body is the Student Council with officers elected from the student body at large, and representatives from the various curriculums. It has the responsibility of promoting and coordinating student affairs. It authorizes the establishment of new clubs and activities and allocates to the organizations funds paid by the students as the Activity Fee. This fee entitles students to admission to varsity games, informal dances and parties, and a subscription to the yearbook and Tech Talk, student newspaper.

Athletic Committee

The Athletic Committee supervises the expenditure of money for athletic purposes and makes recommendations for improvements in the sports program.

Varsity Sports

The name "Hornets" has become well known in Eastern intercollegiate sports. Varsity sports are basketball, baseball, volleyball, wrestling, golf, and cross country. The basketball and baseball teams have been particularly successful in competition against other two-year colleges. The varsity volleyball team, more recently organized, is coming to be recognized as a power in intercollegiate and tournament play.

Intramural Sports

Students of average athletic ability have an opportunity to participate in intramural sports. Teams representing the various curriculums make up the leagues in basketball, volleyball, bowling, softball, touch football, golf and archery.

Cheerleaders

Positions on the varsity and junior varsity cheerleading squads are open to both men and women on a competitive basis.

Social Committee

The Social Committee has charge of planning dances, parties and picnics. Most of the affairs are informal and are held in the gymnasium.

Convocation Committee

A joint student-faculty committee has the responsibility of planning the convocation programs.

Publications

Tech Talk is the student newspaper published once a month and devoted to the reporting of news and features of College life. The yearbook is known as the Citadel. Positions on both publications are open to students interested in writing, art and advertising.

Music

Two organizations attract students who are musically inclined. The Glee Club is composed of both men and women and appears at student and community affairs. The Dance Band, when talent is available, furnishes music for informal college dances.

Camera Club

For those interested in photography the Camera Club provides the chance to get experience in picture taking, developing, printing and enlarging. A well-equipped darkroom is available for student use. Most of the photographic work on the newspaper and yearbook is done by members of the club under faculty supervision.

Business Club

The purpose of the Business Club is to acquaint the community with the work of the Business Technology department and to become acquainted with the businesses and industries of the area. The club is an affiliate of the Triple Cities Chapter, National Office Management Association.

Newman Club

The Newman Club is an informal group organized to foster a better understanding of Catholic ideology. The program features religious lectures and discussions, and social events.

Awards

Outstanding participation in the above activities is recognized by a system of awards consisting of sweaters, jackets, letters, pins, and certificates.

Technical Societies

Students in the technology curriculums have the privilege of becoming associated with professional men in their field by joining the student chapter of one of the technical societies:

American Institute of Electrical Engineers—student member of local chapter

American Chemical Society—student associate of local chapter.

Each student society has its own program. In addition, members may attend meetings of the senior chapter, hear lectures given by outstanding men in technical fields, and see films and demonstrations on new developments.

Faculty-Student Association

This is a non-profit organization, incorporated under the laws of New York State, operated by faculty officers with a student advisory board. The Association operates the bookstore, cafeteria, vending machines and pay telephones.

APPLICATION PROCEDURE

New students are admitted only in September of each year. However, applications will be accepted at any time during the year.

An application for admission must be made on official forms supplied on request by the Admissions Office.

A deposit of \$10 must accompany each application. The deposit is non-refundable but is applied as an advance payment on the student activity fee if the application is accepted. Once a student is accepted, he will be billed for an advance payment of \$50 on tuition. This is also non-refundable for those not reporting for the fall term.

Each applicant will be interviewed by members of the Committee on Admissions. An appointment will be made after the applicant's deposit, application and other required credentials have been received. Appointments for interviews will normally be made after January 1st of each year.

Applicants for Dental Hygiene must have taken the Dental Hygiene Aptitude tests and must have forwarded the results to the Admissions Office prior to personal interviews. Information concerning these tests may be obtained from the Admissions Office.

Transfer Students

Applications are accepted from students who have been enrolled in other accredited colleges if they submit satisfactory entrance requirements.

Transfer of credit for advanced standing is subject to the approval of the Department Head and the Dean.

Consideration will not be given to any subject for transfer credit which carries a grade of less than "C."

Late Registration

An applicant may not register later than seven days after the beginning of the fall term except by special permission.

BUSINESS TECHNOLOGY

This program, planned with the cooperation of engineers, businessmen and office managers, offers training and education in two areas:

1. Engineering Secretarial. Graduates of this option are employed as secretary-stenographers, technical secretaries, and private secretaries. They are in demand where engineers and other technical personnel find a need for secretarial help who can understand the language of engineering reports, correspondence and data. In addition to their business training, these students (both men and women) are given a background of science and engineering terminology to meet this need.
2. Office Administration. Versatility typifies graduates of this option. Many start at clerical positions in accounting, cost, payroll and sales departments, and with experience may progress to such positions as Personnel Assistant, Purchasing Assistant, Tabulating Machine Operator, and Assistant Office Manager. With more experience they may advance to Office Manager, Manager of Administrative Services, and Tabulating Supervisor.

A number of graduates have been accepted as transfer students by four-year, teacher-preparatory colleges in the field of Business Education.

CURRICULUM OUTLINE

Office Administration Option

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
610 Business Mathematics ...	3
630 Mechanical Drawing ...	2
640 Accounting	3
648 Survey of Business	3
*, ** (See note below)	

TERM 2

(Winter Term)	Credit Hours
72 Communication Skills ...	3
91 Psychology	3
92 Economics	3
611 Business Mathematics ...	3
620 Science	3
641 Accounting	3
*, ** (See note below)	

TERM 3

(Spring Term)	Credit Hours
73 Communication Skills ...	3
93 Economics	3
603 Advanced Typewriting ..	3
642 Accounting	3
658 Business Law	3
Elective	3

TERM 4

(Fall Term)	Credit Hours
81 Industrial Safety and First Aid	2
643 Payroll and Social Security	3
644 Cost Accounting	3
659 Business Law	3
661 Office Management	3

TERM 5

(Winter Term)	Credit Hours
75 Effective Speaking	3
645 Principles of Machine Accounting	3
656 Office Practice	4
662 Office Management	3
Elective	3
Elective	3

TERM 6

(Spring Term)	Credit Hours
657 Office Practice	4
675 Business English	3
695 Industrial Organization and Management	3
Elective	3
Elective	3

* Typewriting I, II

Will be offered (at no credit) for those persons who do not have sufficient training in this skill to pass screening tests at the beginning of Terms 1, 2, the first year.

** Speed Lab

Persons who have passed Typewriting will be expected to take Speed Lab for skill maintenance (no credit).

CURRICULUM OUTLINE

Engineering Secretarial Option

TERM 1

(Fall Term)		Credit Hours
71	Communication Skills ...	3
610	Business Mathematics ...	3
630	Mechanical Drawing	2
640	Accounting	3
648	Survey of Business	3
	*, **, *** (See note below)	

TERM 4

(Fall Term)		Credit Hours
81	Industrial Safety and First Aid	2
607	Transcription	3
622	Elements of Technology .	3
643	Payroll and Social Security	3
659	Business Law	3
	Elective	3

TERM 2

(Winter Term)		
72	Communication Skills ...	3
91	Psychology	3
92	Economics	3
611	Business Mathematics ...	3
620	Science	3
641	Accounting	3
	*, **, *** (See note below)	

TERM 5

(Winter Term)		
75	Effective Speaking	3
601	Shop	2
608	Technical Shorthand ...	3
645	Principles of Machine Accounting	3
656	Office Practice	4
	Elective	3

TERM 3

(Spring Term)		
73	Communication Skills ...	3
93	Economics	3
603	Advanced Typewriting ..	3
606	Advanced Shorthand ...	3
621	Elements of Technology .	3
642	Accounting	3
658	Business Law	3

TERM 6

(Spring Term)		
602	Shop	2
609	Technical Shorthand ...	3
657	Office Practice	4
675	Business English	3
	Elective	3
	Elective	3

* Shorthand I, II
** Typewriting I, II

Will be offered (at no credit) for those persons who do not have sufficient training in these skills to pass screening tests at the beginning of Terms 1, 2, the first year.

*** Speed Lab

Persons who have passed Typewriting and/or Shorthand will be expected to take Speed Lab for skill maintenance (no credit).

BUSINESS TECHNOLOGY

SHOP (601, 602)

Observation and discussion of the machines and materials used in industry to produce machines, appliances, containers, etc. Practice in processing metals, leading to acquaintance with technical and shop terms and an appreciation of what is done in machine shops.

ADVANCED TYPEWRITING (603)

Continuation of basic skill building with emphasis on speed and advanced problems. Rough drafts, technical data such as specifications, manuscripts, legal papers. (Prerequisite, elementary typewriting or equivalent.)

ADVANCED SHORTHAND (606)

A skill-building course founded upon basic theory which most students will have had in high school. Training in speed building, English grammar and punctuation, with dictation from various fields of business and industry. (Prerequisite, elementary shorthand or equivalent.)

TRANSCRIPTION (607)

Development of skill in reading shorthand notes and producing from them a mailable manuscript on the typewriter. Persons not having previous shorthand training will transcribe from dictating-transcribing machines.

TECHNICAL SHORTHAND (608, 609)

Dictation of technical material to be transcribed on the typewriter. Further drives for speed of dictation. Building of the technical vocabulary found in chemical, electrical, mechanical, civil engineering. Use of specifications, contracts, and letters from these fields and the building construction industry. Use of standard secretarial references and dictionaries.

BUSINESS MATHEMATICS (610, 611)

Fundamental mathematical combinations and processes; the purpose and use of shortcut operations; simple and compound interest; bank, cash and trade discounts, mark-ups and percentage. Logarithms and the use of the slide rule. Verbal problems, simple equations, graphical representation, basic statistics.

BUSINESS STATISTICS (615)

The concepts and mechanics of basic statistical methods applicable to problems of business and economics. Emphasis on graphical representation of data.

SCIENCE (620)

A general survey of the physical sciences. The significance of science in relation to modern living. The methods of science.

ELEMENTS OF TECHNOLOGY (621, 622)

The fundamental laws and theories of chemical, electrical, and mechanical technology. Lectures, readings, and practice material to provide a background of technical terminology. (Prerequisite, science.)

MECHANICAL DRAWING (630)

Technical sketching and pictorial representation. Application of auxiliary views, sections, and conventions used in orthographic projection. Types and presentation of threads, nuts, bolts, keys, keyways and locking devices, and assembly drawings. Discussion of shop processes and procedures to facilitate the understanding of drafting problems which arise in the industrial drafting room. Layout of work areas from building plans.

ACCOUNTING (640)

The basic principles of accounting from the books of original entry to the preparation of financial statements.

ACCOUNTING (641)

Advanced accounting with emphasis on controlling accounts, subsidiary ledgers, partnerships, corporations, the voucher system, manufacturing accounting, and the interpretation of financial statements.

ACCOUNTING (642)

Columnar journals, partnerships, corporations, voucher system, analysis and interpretation of financial statements. Intensive work on a practice set taken from the field.

PAYROLL AND SOCIAL SECURITY (643)

A comprehensive coverage of the legislation behind and practical application of accounting for social security and tax withholding from the standpoint of the employer.

COST ACCOUNTING (644)

Cost accounting principles with emphasis on the accounting for material, labor, and factory burden. Use of the voucher system and factory journal. A brief consideration of the various systems and methods used in cost accounting.

PRINCIPLES OF MACHINE ACCOUNTING (645)

The applications of various types of machines to accounting, statistical and payroll work, based upon a thorough mastery of the principles of double entry accounting. Acquaintance with punched card, electric and keyboard-operated systems. Use of visual aids, and visits to local installations of these different types of equipment.

ADVANCED MACHINE ACCOUNTING (646)

Further application of the principles of machine accounting. Where practicable, experience at observing and performing machine operations.

SURVEY OF BUSINESS (648)

A fundamental course dealing with the history and development of business and industry from ancient times to the present day. An appreciation of the activities of business organization, and a view of some of the problems which business and industry must solve routinely.

ADVERTISING PRINCIPLES (649)

Effective expressions in the printed appeal, headlines, mass appeal, layouts, illustrations, type faces, advertising media, and how to work with printers and advertising agencies. Emphasis on understanding and evaluating advertising rather than on developing technical skill.

SALESMANSHIP (650)

The basic principles of sales and services with practical applications of the principles. Prospecting, product and service analysis, meeting objections, demonstrating, sales psychology, and preparation of sales presentations.

SALES MANAGEMENT (651)

Development of techniques of control in the administration of sales forces. Incentive systems, territory planning, development of sales potentials, and personnel problems peculiar to this field.

FINANCE (652)

Financial principles and procedures. Detailed analyses of such factors as forms of business organization, corporate organization and problems, financial structure of business groups, financial instruments, surplus and reserves, credit and collections, and reorganizations.

OFFICE PRACTICE (656, 657)

(a) Office procedure. By means of a hypothetical business concern, students are rotated to the positions of office manager, receptionist, secretary, file clerk, and duplicating clerk. Emphasis on good grooming, desirable work attitudes, and business ethics.

Techniques of telephone procedure, duplicating, switchboard operation. Use of standard secretarial office textbook as the basis of discussions and assignments.

(b) Office machines. Basic training in the operation of transcribing machines, four principal types of adding-calculating machines, electric typewriters. Fundamentals of filing covering the following areas: alphabetic, geographic, subject, numeric. Projects for advanced study and skill development.

BUSINESS LAW (658)

The basic principles of contracts, involving the requisites for valid contracts, parties to the contracts, offer and acceptance, performance and discharge. Applications of contracts to agency. The legal aspects of partnerships and corporations, real estate law.

BUSINESS LAW (659)

A continuation of the study of contracts as applied to sales, bailments, carriers, warehousemen. Negotiable instruments, the rights and obligations associated with them. Survey of bankruptcy.

OFFICE MANAGEMENT (661, 662)

A comprehensive course correlating and integrating all phases of the science of office management including cost control, work simplification, forms control, office service, office layout.

PRINCIPLES OF CREDIT (666)

A basic course covering a working knowledge of credits and collections, types of credit, credit department organization, credit reports and information, credit risk factors, collection procedures.

INSURANCE (667)

The type of coverage available for different risks encountered in business and industry as well as in private life.

REAL ESTATE (669)

An introduction to the services expected of a real estate broker and his salesman, equipment needed, listings, securing prospects, property, making the sale, financing, professional standards.

BUSINESS ENGLISH (675)

An application of the art of communication to the business world. Composition and dictation of business correspondence. Preparation of reports, articles; planning and presentation of speeches.

PERSONNEL ADMINISTRATION (691)

The nature and functions of personnel administration; techniques and methods used to achieve utilization of manpower in business through proper selection, placement, training, job evaluation, wage setting and employee relations.

ECONOMIC GEOGRAPHY (692)

Geographic reasons behind the economic trends apparent in the countries of the world, the economic areas of the United States. Particular reference to New York State.

INDUSTRIAL ORGANIZATION AND MANAGEMENT (695)

Introduction to the major functions or departments of industry, their inter-relationship, and how they are brought together through organization. The preliminary phases of methods, cost, production control, product development, finance, physical facilities, quality control, plant engineering, industrial relations, job evaluation, sales advertising, budgets, records.

FUNDAMENTALS OF SUPERVISION (697)

A consideration of the problems faced by the supervisor in his day-to-day relations with co-workers. The factors necessary in the selection, development, and promotion of people to supervisory posts. (Prerequisite, Personnel Administration.)

PUBLIC RELATIONS (698)

Through lectures, readings and discussions, the development of the main principles and theories of public relations with application to actual cases.

CHEMICAL TECHNOLOGY

FORTUNE magazine predicts that this will be known as "The Chemical Century." The distinguishing mark of the age is a basically new form of manufacture. The early part of the century was dominated by the fabrication of existing materials by mass production methods; however, in the latter part of the century chemical processes are creating new materials. Chemical technology has moved so fast that this industry accounts for about a fifth of the total national products.

There is one dark cloud on the horizon for the chemical industry: the lack of trained personnel. CHEMICAL ENGINEERING reports, "The industry enters a new era in which the shortage of technical men will be a major controlling factor—if not limiting factor—in any future expansion plans." Among the workers needed are technicians who are capable of filling responsible positions in research, development and testing laboratories, in pilot plants and production.

The Chemical Technology curriculum at Broome Technical Community College is designed to prepare ambitious and reliable young men and women as technicians in this fast-growing industry.

CURRICULUM OUTLINE

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
81 Industrial Safety and First Aid	2
210 Mathematics	3
220 Physics (Heat, Light, Sound)	4
230 Engineering Drawing	2
240 General Chemistry	5

TERM 2

(Winter Term)

72 Communication Skills ...	3
91 Psychology	3
211 Mathematics	3
221 Electricity	4
241 General Chemistry	4
242 Qualitative Chemistry ...	4

TERM 3

(Spring or Summer Term)*

73 Communication Skills ...	3
212 Mathematics	3
243 Quantitative Chemistry ..	6
250 Organic Chemistry	6

TERM 4

(Fall or Winter Term)*	Credit Hours
92 Economics	3
213 Mathematics	3
244 Quantitative Chemistry ..	6
251 Organic Chemistry	6
255 Industrial Chemistry	3

TERM 5

(Spring Term)

74 Communication Skills ...	3
93 Economics	3
245 Advanced Quantitative Analysis	5
256 Industrial Chemistry	5
296 Industrial and Labor Relations	3

* Student is in school one term and in industry one term during these periods.

CHEMICAL TECHNOLOGY

MATHEMATICS (210)

Algebra with application to technical problems. Positive and negative numbers, factors and exponents, logarithms, binomial theorem, solution of linear and quadratic equations. Use of the slide rule.

MATHEMATICS (211)

Plane trigonometry and graphical representation with emphasis on application to the student's field of study. Use of the slide rule.

MATHEMATICS (212)

Chemical calculations supplementary to the quantitative chemistry course. Problems used in making quantitative analysis calculations: oxidation-reduction, chemical factors, acid-base types, typical gas analysis.

MATHEMATICS (213)

Stoichiometry. The material balances, energy balances, and the chemical laws of combining weights as applied to chemical processes.

PHYSICS (HEAT, LIGHT, SOUND) (220)

Heat: the measurement of temperature, expansion, calorimetry, change of state, heat and work, kinetic theory of gases, and mechanical equivalent of heat. Light: geometrical and physical optics, including the nature of light, refraction, lenses, optical instruments, polarization, emission and absorption of light. Sound: wave motion and sound, sound waves, and velocity of sound.

ELECTRICITY (221)

Electricity and magnetism. Magnetic and electrostatic fields, electric potential, Ohm's law, measurement of resistance by voltmeter and ammeter and by Wheatstone's bridge, laws of electrolysis, cell combinations, potentiometer, electromagnetism, Lenz' Law, inductance and capacitance, simple a-c and d-c circuits, elements of electrical machinery, thermocouples, and thermionic emission.

ENGINEERING DRAWING (230)

An introductory course in mechanical drawing. The use of instruments, drafting conventions, dimensioning, and orthographic projection. Emphasis on detail and working drawings, piping layouts, structural layouts, and projects.

GENERAL CHEMISTRY (240, 241)

The fundamental laws and theories necessary to understand the phenomena of chemical action. The properties of individual elements and groups of elements and the solving of related problems. Laboratory work to develop techniques and qualities for greater proficiency in later laboratory work.

QUALITATIVE CHEMISTRY (242)

A theoretical discussion of ionization constants, solubility products and equilibrium constants as influencing qualitative analysis. Laboratory work including the detection and identification of the more important cations and anions including work on the analysis of mixtures. Emphasis on various tests: flame, blow-pipe, bend, open and closed tube, and solubility. Use of the hand spectroscope and light microscope.

QUANTITATIVE CHEMISTRY (243)

The application of physical and chemical theory to the more important volumetric and gravimetric procedures. The analytical balance, errors, precision, significant figures, and methods of preparation of samples for analysis. Laboratory work in the application of various methods of quantitative analysis including volumetric precipitation, complex-ion, acid-base, redox, and simple gravimetric.

QUANTITATIVE CHEMISTRY (244)

The quantitative separation of elements found in ferrous and non-ferrous alloys, ores, and minerals. Analysis of a few simple commercial products. Introduction to instrumental methods of analysis: electrolytic, electrometric titration, gasometric, and polarimetric.

ADVANCED QUANTITATIVE ANALYSIS (245)

Current instrumental methods of analytical analysis. Class and laboratory work in such areas as spectrophotometry, polarography, potentiometry, chemical microscopy, chromatography, flame photometry, etc. Related technical report writing.

ORGANIC CHEMISTRY (250)

The important classes of carbon compounds such as hydrocarbons, alcohols, ethers, esters, amines, etc. in terms of modern electronic and resonance theories. Related laboratory work.

ORGANIC CHEMISTRY (251)

Heterocyclic compounds, tautomerism, stereoisomerism, dyes, proteins, synthetic resins, etc. Introduction to the systematic identification of organic compounds. Class and laboratory work.

INDUSTRIAL CHEMISTRY (255)

The industrial adaptation of chemical processes in the manufacturing of chemicals and allied products, involving quantities, yields, handling of materials, the most efficient types of equipment, and the factors of the flow of energy and its best utilization. Specific studies of fuels, the flow of fluids, heat transfer, and evaporation. Laboratory work conducted in manner similar to industrial research.

INDUSTRIAL CHEMISTRY (256)

Size reduction and separation, humidity and air conditioning, drying, distillation and absorption.

INDUSTRIAL AND LABOR RELATIONS (296)

Human relations in industry including a study of the individual and why he behaves as he does, group behavior and the reduction of destructive conflicts between them. Case studies in which the human element is isolated and analyzed.

DENTAL HYGIENE

The demand for medical and dental service in the United States is increasing steadily because of the rapid growth of the population and the greater recognition of the need for health services by the individual and society. Today more than one million people in the United States are employed in some type of medical or health service; of these almost 60% are women.

Since World War II there has been a growing demand for young women trained as dental hygienists. The services of these technicians are invaluable, permitting dentists to increase their own efficiency and to extend their services to more patients.

The Dental Hygiene curriculum includes a well-rounded program of general education, the basic sciences related to oral hygiene, and dental office and laboratory practice. The clinic is equipped with the most modern type of dental units and motor-driven chairs. The X-ray equipment is of the latest design. The laboratory has complete facilities for introductory training.

Graduates of the two-year Dental Hygiene curriculum receive the Associate in Applied Science degree and are qualified to take the New York State licensing examination. With the completion of additional requirements of the New York State Education Department, graduates may teach dental hygiene in the schools.

CURRICULUM OUTLINE

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills . . .	3
82 First Aid	2
700 Dental Manikin Practice .	3
710 Mathematics	3
740 Dental Anatomy	4
748 Gross Anatomy and Physiology	3

TERM 2

(Winter Term)	
72 Communication Skills . . .	3
91 Psychology	3
701 Dental Manikin Practice .	3
741 Dental Anatomy	1
746 Histology and Embryology	3
749 Gross Anatomy and Physiology	3
781 Public Health	2

TERM 3

(Spring Term)	
73 Communication Skills . . .	3
703 Oral Hygiene	2
723 Chemistry	4
728 Bacteriology	4
742 Dental Anatomy	1
750 Hygiene	2
756 Typing	0

TERM 4

(Fall Term)	Credit Hours
75 Effective Speaking	3
704 Oral Hygiene	4
744 Preventive Dentistry	3
751 Pharmacology	2
754 Pathology	3
733 Dental Health Education .	3

TERM 5

(Winter Term)	
92 Economics	3
705 Oral Hygiene	4
753 Radiology	3
758 Dental Office Practice . .	3
761 Nutrition	2
785 Health Services in Schools	3

TERM 6

(Spring Term)	
94 Sociology	3
706 Oral Hygiene	4
759 Dental Office Practice . .	3
760 Dental Laboratory Practice	3
764 School Organization	3

DENTAL HYGIENE

DENTAL MANIKIN PRACTICE (700, 701)

The proper prophylactic technique on manikin heads with articulated teeth. The removal of stain and simulated calculus from exposed surfaces of the teeth, use of the porte polisher and dental engine, mouth examination and charting.

ORAL HYGIENE (703, 704, 705, 706)

The prophylactic technique applied to actual work on patients. Performing prophylaxis on children and adults, mouth examination and charting, topical applications, taking, processing, and mounting X-ray films; sterilization techniques, caring for dental equipment.

MATHEMATICS (710)

Review of fundamental operations with applications of decimal fractions, common fractions, percentage, and proportion. Metric and apothecaries measures of weight and volume. Equivalent measures in household, metric, and apothecaries systems. Mathematics involved in the preparation of solutions and dosages.

CHEMISTRY (723)

The basic principles of chemistry with applications to meet the needs of the dental hygienist. The structure, properties, and functioning of the various organic compounds with which the student comes in contact in pharmacology and which should be known in order to understand metabolism and other phases of biochemistry. Lectures, demonstrations, and recitations.

BACTERIOLOGY (728)

The fundamentals of general and medical microbiology and the basic phases of immunology. Methods of sterilization and disinfection, staining and examining of bacteria, and the methods employed in the separation of the species and their isolation and identification. Special attention to the flora of the oral cavity and the relation of bacteriological knowledge to the prevention of disease.

DENTAL ANATOMY (740, 741, 742)

Lectures on dental nomenclature, growth and development of teeth, fundamentals of individual tooth form and function, the supporting structures of the oral cavity. A detailed study of bones, nerves, and muscles of the head. Laboratory experience including drawing and carving each tooth in one quadrant of the maxillary arch and the lower first molar; pouring models of the permanent and deciduous dentition. Term projects.

PREVENTIVE DENTISTRY (744)

Lectures covering the principles of brushing, various methods of first aid in dentistry, descriptions of normal mouth conditions, known causes of decay, and methods of preventing tissue degeneration and oral infections.

HISTOLOGY AND EMBRYOLOGY (746)

The origin and structure of the tissues of the oral cavity. Laboratory work covering the use of the microscope, examination of microscopic slides of tissues, and drawing of these tissues complete with labels.

GROSS ANATOMY AND PHYSIOLOGY (748, 749)

The structure and function of the body as an integrated whole. An overview of skeletal, muscular, circulatory, respiratory, digestive, and nervous systems. Vocabulary building.

HYGIENE (750)

The various factors (physical, social, psychological) which affect the total health status of the individual, and the effective application of sound health principles in solving health problems.

PHARMACOLOGY (751)

The derivation, preparation, dosage, properties, and effects of drug groups with special emphasis on those drugs used in dentistry. The fundamentals of prescription writing.

RADIOLOGY (753)

The technique of operation of the dental X-ray machine. The taking and uses of intra- and extra-oral films. Development and mounting of dental roentgenograms.

PATHOLOGY (754)

The basic fundamentals of pathology with special emphasis on the tissues of the oral cavity.

TYPING (756)

All dental hygiene students take a screening test prior to this course and those who pass are exempt. The complete keyboard, personal and business letters, simple tabulation, and monthly statements.

DENTAL OFFICE PRACTICE (758, 759)

Preparation for practical office assistance covering all phases of the functioning of a dental office. Personality training, reception of patients, use of telephone, typing, care of dental equipment and instruments, inventory and ordering of supplies, recall system, billing, filing.

DENTAL LABORATORY PRACTICE (760)

The laboratory phases of a dental office. Materials used in dentistry, the making of casts from impressions, selection of artificial teeth for various age groups, casting technique, gum carvings, and esthetic setups of teeth on dentures.

NUTRITION (761)

Principles of nutrition: the roles and sources of the various food groups, the variables that influence nutritional needs, relationship between nutrition and health and disease with emphasis on the correlation between diet and teeth.

SCHOOL ORGANIZATION (764)

The school program in terms of organization, administration, finance, personnel, school laws and regulations, teacher organizations, and their interrelationships and implications.

PUBLIC HEALTH (781)

An overall picture of public health (history, philosophy, structure, services) with emphasis on community dental health. Field trips to various health agencies.

DENTAL HEALTH EDUCATION (783)

The basic laws and principles of learning and their application to the various methods that may be used in teaching dental health, evaluation and demonstration of the use of materials available as teaching aids, experience in the use of methods and materials in specific teaching situations.

HEALTH SERVICES IN SCHOOLS (785)

The place and function of health services in public education, laws and regulations which apply to health services in schools, factors which influence the health status of the child in the school environment, the coordination of school and community health services.

ELECTRICAL TECHNOLOGY

Electric power was first produced commercially in this country about 70 years ago. Today it has become an indispensable part of our daily living. It is an energizing force without which most industrial and even home activity would be impossible.

More than 87,000,000 kilowatts of electric power are installed in power plants of the country today. Evaluating horsepower as equivalent to 10 times the power of a man, the average factory worker is therefore supported by the equivalent of 75 slaves.

Needless to say, the human element is very important in this vast field. Thousands of people are needed—people to visualize, plan, build, direct and operate. Two-year technical colleges, like Broome Tech, are becoming increasingly important in preparing well trained men for the electrical field. Such colleges can train men to do highly specialized work of an engineering nature in less time than the normal four-year course.

Demand exceeds the supply of Broome Tech graduates for positions in power generation, communications, illumination, electronics, research and testing.

CURRICULUM OUTLINE

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
81 Industrial Safety and First Aid	2
300 Electrical Construction and Maintenance	2
310 Mathematics	3
330 Engineering Drawing ...	2
340 Electrical Circuits	5

TERM 2

(Winter Term)	
72 Communication Skills ...	3
360 Mechanics	3
301 Electrical Construction and Maintenance	2
311 Mathematics	3
331 Engineering Drawing ...	2
341 Electrical Circuits	5

TERM 3

(Spring or Summer Term)*

73 Communication Skills ...	3
302 Electrical Construction and Maintenance	1
312 Mathematics	3
332 Electrical Design	2
342 Electrical Circuits	5
348 Electronics	6

TERM 4

(Fall or Winter Terms)*	Credit Hours
91 Psychology	3
92 Economics	3
333 Electrical Design	1
345 Electrical Machines	5
349 Electronics	6
394 Industrial Organization ..	3

TERM 5

(Spring Term)	
93 Economics	3
334 Electrical Design	1
346 Electrical Machines	5
350 Electronics	6
354 Industrial Control	4
395 Industrial Organization ..	3

* Student is in school one term and in industry one term during these periods.

ELECTRICAL TECHNOLOGY

ELECTRICAL CONSTRUCTION AND MAINTENANCE (300, 301, 302)

A sequence of courses to familiarize the student with general trade practices and the acquiring of basic manipulative skills. Experience in the installation and maintenance of electrical equipment. Basic training in the different types of wiring systems used in industry and homes, trouble-shooting and repair of electrical equipment, use of the lathe, drill press, shaper, welder and associated equipment. Study of the National Electrical Code Rules, shop safety practices. Some electrical estimation work.

MATHEMATICS (310)

Algebra with applications to technical problems. Positive and negative numbers, factors and exponents, binomial theorem, solution of linear and quadratic equations. Use of the slide rule.

MATHEMATICS (311)

Plane trigonometry and graphical representation with emphasis on application to the student's field of study. Use of the slide rule.

MATHEMATICS (312)

The application of mathematics to the solution of problems in electrical technology.

ENGINEERING DRAWING (330)

An introductory course. Technique of good lettering, practical geometry and geometric construction, principles of orthographic projection, theory and application of dimensioning.

ENGINEERING DRAWING (331)

Technical sketching and pictorial representation. Applications of auxiliary views, sections and conventions used in orthographic projection. Types and representation of threads, bolts, nuts, keys, keyways and locking devices, and assembly drawings. Discussion of shop processes and procedures to facilitate the understanding of drafting problems. Emphasis on free-hand sketching of mechanisms.

ELECTRICAL DESIGN (332)

Electrical drafting to further the student's understanding of the principles of lighting design, wiring layouts, and the interpretation of schematic diagrams as applied to electrical control equipment. The use of catalogs, charts, data sheets, and the National Electrical Code book to obtain information needed for the layout and design of electrical circuits. Preparation of material lists and estimates of costs. Planning of lighting and control wiring layouts.

ELECTRICAL DESIGN (333)

A further study of control circuit diagrams and outline drawings of panel and switch boards. Layouts of substations and transmission circuits. Interpretation of the schematic and one-line diagrams that are the engineering language of the electrical industry.

ELECTRICAL DESIGN (334)

The application of electrical drafting in the field of electronics. Symbols, conventions, layout procedures, and circuit sequence that comprise an electronic circuit. The design of a circuit for an electronic device that the students may wish to construct, test and operate.

ELECTRICAL CIRCUITS (340)

D-C fundamentals, the solution of series, parallel, series-parallel, and complex circuits, magnetism, electro-magnetism, magnetic circuits, and instruments. Laboratory techniques, use and protection of equipment.

ELECTRICAL CIRCUITS (341)

Continuation of D-C circuits, covering complex circuits and the application of Kirchhoff's laws, Thevinum's theorem and superposition. Theory of inductance, capacitance, and circuit time constants.

ELECTRICAL CIRCUITS (342)

A-C fundamentals, solution of series, parallel, and combination circuits employing the use of polar vectors in both single and polyphase circuits. A-C instruments.

ELECTRICAL MACHINES (345)

Theory, operation and application of D-C machinery. Introduction to single and polyphase transformers, their design, characteristics and applications. Use of vector diagrams. Class work and directly related laboratory experience.

ELECTRICAL MACHINES (346)

Continuation of the work on transformers with special attention to special connectors. Alternators, synchronous motors, induction motors. Theory of design, construction, characteristics, and applications. Laboratory work dealing with several methods of evaluation. Special methods for predicting characteristics, including vector and circle diagram methods.

ELECTRONICS (348)

Introductory course. The characteristics and behavior of the various components of electronic circuits: tubes, transistors, saturable reactors, etc. How these components affect circuits in which they are used.

ELECTRONICS (349)

The behavior and application of the fundamental circuits in which the components studied in Electronics 348 are used.

ELECTRONICS (350)

The behavior and application of circuits consisting of a combination of two or more of the fundamental circuits. Emphasis on understanding the behavior and methods of checking for causes of malfunction.

INDUSTRIAL CONTROL (354)

The design and operation of industrial equipment used in the automatic control of industrial motors and generators. Laboratory work involving the connecting, operation and trouble-shooting of these control devices.

MECHANICS (360)

A basic course in the principles of statics. Composition and resolution of forces, concurrent-coplanar forces, parallel forces, center of gravity, force couples, non-coplanar forces, and friction. Principles of dynamic forces.

INDUSTRIAL ORGANIZATION (394)

A treatment of management essentials and the interrelationship of specialized functions together with the principles governing them. Organization of basic industrial structures, organizing physical facilities, developing the product, production, and quality control.

INDUSTRIAL ORGANIZATION (395)

Administration of industrial relations: personnel management, employee training, job evaluation, merit rating, sales and budgetary control, and coordination of the enterprise. Case problems.

MECHANICAL, CONSTRUCTION AND AUTOMOTIVE TECHNOLOGY

New York is the greatest industrial state in the nation. About one out of every five of the nation's factories lies inside its borders. Of the 453 types of industries classified by the Bureau of the Census, 430 are found in the State, a larger number than in any other state. Thirty percent of its workers are engaged in manufacturing as compared with 25% in the rest of the country.

In order to maintain and expand such concentrated industrial capacity, there must be a constant reservoir of trained men. Furthermore, the level of technical competence required in the mechanical field is becoming increasingly higher because of the complexity of modern machinery.

It is well known that industry today is concerned about the availability of engineering and technical personnel. This need is felt particularly in New York State because of the number and variety of its industries.

There is a broad area in industry in which the employment of technicians is desirable: quality control, production, planning, drafting, time study, sales. More and more employers are turning to two-year technical graduates to fill positions on the technical level.

The two-year Mechanical Technology program at Broome Tech is preparing young men to take their places as technicians and engineering aides in the industries of New York and other states.

Automotive Technology is an option in the second year to prepare young men to make proper diagnosis of and repairs on cars and trucks. The fundamental sciences are applied to the maintenance problems of the automobile. Some time is devoted to business management and accounting.

Construction Technology is another second-year option in which students are given specialized highway or building construction courses, such as architectural or topographical drafting, surveying, structural design, estimating, and specification writing.

CURRICULUM OUTLINE

Mechanical Technology

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
81 Industrial Safety and First Aid	2
91 Psychology	3
400 Shop	2
410 Mathematics	3
430 Engineering Drawing ...	2
440 Mechanics	4

TERM 2

(Winter Term)	
72 Communication Skills ...	3
401 Shop	2
411 Mathematics	3
421 Electricity	4
431 Engineering Drawing	1
441 Mechanics	3
445 Heat	4

TERM 3

(Spring or Summer Term)*	
73 Communication Skills ...	3
402 Shop	2
412 Mathematics	3
432 Mechanisms	4
442 Strength of Materials	4
446 Metallurgy	4

TERM 4

(Fall or Winter Term)*	Credit Hours
92 Economics	3
403 Shop	2
413 Mathematics	3
433 Machine Design	4
448 Mechanical Machines ...	4
460 Electricity	4

TERM 5

(Spring Term)	
93 Economics	3
404 Advanced Processes	2
434 Production Design	3
449 Mechanical Machines ...	4
450 Quality Control	4
494 Industrial Organization ..	3

* Student is in school one term and in industry one term during these periods.

CURRICULUM OUTLINE

Construction Technology

BUILDING OPTION

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
81 Industrial Safety and First Aid	2
91 Psychology	3
400 Shop	2
410 Mathematics	3
430 Engineering Drawing	2
440 Mechanics	4

TERM 2

(Winter Term)	Credit Hours
72 Communication Skills ...	3
401 Shop	2
411 Mathematics	3
421 Electricity	4
431 Engineering Drawing ...	1
441 Mechanics	3
445 Heat	4

TERM 3

(Spring Term)	Credit Hours
73 Communication Skills ...	3
412 Mathematics	3
436 Architectural Drafting ...	1
442.1 Strength of Materials ..	4
468 Principles of Construction	3
475 Concrete	3
476 Surveying	2

TERM 4

(Fall Term)	Credit Hours
92 Economics	3
413 Mathematics	3
425 Electrical Equipment for Buildings ...	4
437 Architectural Drafting ...	1
469 Structural Theory	3
477 Surveying	2
479 Estimating	3

TERM 5

(Winter Term)	Credit Hours
93 Economics	3
427 Mechanical Equipment for Buildings	4
439 Structural Drawing	1
470 Structural Theory	3
472 Building Design	1
480 Specification Writing	3
558.1 Business Law	3

TERM 6

(Spring Term)	Credit Hours
428 Mechanical Equipment for Buildings	3
471 Structural Design	4
473 Building Design	2
485 Construction Planning ...	3
487 Soil Mechanics	4
695.3 Industrial Organization and Management	3

CURRICULUM OUTLINE

Construction Technology

HIGHWAY OPTION

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
81 Industrial Safety and First Aid	2
91 Psychology	3
400 Shop	2
410 Mathematics	3
430 Engineering Drawing ...	2
440 Mechanics	4

TERM 2

(Winter Term)	Credit Hours
72 Communication Skills ...	3
401 Shop	2
411 Mathematics	3
421 Electricity	4
431 Engineering Drawing ...	1
441 Mechanics	3
445 Heat	4

TERM 3

(Spring Term)	Credit Hours
73 Communication Skills ...	3
412 Mathematics	3
436 Architectural Drafting ...	1
442.1 Strength of Materials ...	4
468 Principles of Construction	3
475 Concrete	3
476 Surveying	2

TERM 4

(Fall Term)	Credit Hours
92 Economics	3
413 Mathematics	3
438 Topographical Drafting ..	1
469 Structural Theory	3
477.1 Surveying	3
479.1 Estimating	3
482 Highway Theory	3

TERM 5

(Winter Term)	Credit Hours
93 Economics	3
439 Structural Drawing	1
447 Hydraulics	4
470 Structural Theory	3
480.1 Specification Writing ...	3
483 Highway Design	1
558.1 Business Law	3

TERM 6

(Spring Term)	Credit Hours
471 Structural Design	4
484 Highway Design	2
485 Construction Planning ...	3
486 Materials Testing	2
487 Soil Mechanics	4
695.3 Industrial Organization and Management	3

CURRICULUM OUTLINE

Automotive Technology

TERM 1

(Fall Term)	Credit Hours
72 Communication Skills ...	3
81 Industrial Safety and First Aid	2
91 Psychology	3
400 Shop	2
410 Mathematics	3
430 Engineering Drawing ...	2
440 Mechanics	4

TERM 2

(Winter Term)	
72 Communication Skills ...	3
401 Shop	2
411 Mathematics	3
421 Electricity	4
431 Engineering Drawing ...	1
441 Mechanics	3
445 Heat	4

TERM 3

(Spring or Summer Term)*	
73 Communication Skills ...	3
402 Shop	2
412 Mathematics	3
432 Mechanisms	4
442 Strength of Materials ...	4
446 Metallurgy	4

TERM 4

(Fall or Winter Term)*	Credit Hours
92 Economics	3
405 Automotive Shop	2
435 Design (Automotive)	4
451 Internal Combustion Engines	4
459 Automotive Electricity ...	4
465 Accounting	3

TERM 5

(Spring Term)	
93 Economics	3
406 Automotive Shop	2
407 Transmissions	2
408 Diagnosis	2
452 Internal Combustion Engines	4
466 Accounting	1
495 Business Management ...	3

* Student is in school one term and in industry one term during these periods.

MECHANICAL TECHNOLOGY

SHOP (400)

The elements of machine tool operations involving the use of lathe, miller, shaper, drill press and fundamental bench operations. Cutting speeds and feeds, coolants, threads, tapers, drills, reamers and cutting tool angles.

SHOP (401)

Continuation of Shop (400) plus operations of the surface grinder and the cylindrical grinder. Practice and study of oxy-acetylene arc and resistance welding. Abrasives, grinding wheels and grinding methods.

SHOP (402)

Advanced operations on the lathes and milling machines, boring, internal threading, gear cutting and spiral milling, internal grinding, tool and outer grinding, lapping, honing and scraping.

SHOP (403)

Practice and study of precision measuring instruments and inspection methods. Problems in precision hole location involving jig boring, mill boring and lathe boring.

ADVANCED PROCESSES (404)

An advanced study of strength of materials and metallurgy as applied to the manufacturing processes. Weld tests, corrosion, fatigue, creep, hardenability, stress concentration, laboratory work.

MATHEMATICS (410)

Algebra with application to technical problems. Positive and negative numbers, factors and exponents, logarithms, binomial theorem, solution of linear and quadratic equations. Use of the slide rule.

MATHEMATICS (411)

Plane trigonometry and graphical representation with emphasis on application to the student's field of study. Use of the slide rule.

MATHEMATICS (412)

Curves and equations, straight lines, conic sections, transformation of coordinates, polar coordinates, empirical equations, and graphs.

MATHEMATICS (413)

Calculus fundamentals, functions and limits, differentiation of standard forms, maxima and minima, integration of standard forms, integration of more complex forms by various devices.

ELECTRICITY (421)

The fundamentals of direct-current and alternating-current circuits; magnetism and induction.

ENGINEERING DRAWING (430)

An orientation course in the basic phases of engineering drawing including orthographic projection, pictorial representation, geometric construction and pattern development. Freehand sketching of models and machine parts.

ENGINEERING DRAWING (431)

Continuation of Drawing (430) with emphasis on detail and assembly working drawings. Selected projects to illustrate the conventions and standards of welding, piping and tolerances.

MECHANISMS (432)

Machine motion and basic mechanisms. Instantaneous velocities in machine parts, gears, cams and the theory of their design and operation; fundamental principles of planetary gearing.

MACHINE DESIGN (433)

A basic course in machine design covering the selections of materials, stress investigation, and the design of the fundamental machine elements.

PRODUCTION DESIGN (434)

Process planning, selection of machinery, sequence of operations, speed and feeds, selection of standard tools, design of dies, jigs, fixtures and gages.

MECHANICS (440)

Basic principles of statics and dynamics. Study of forces, friction work, power, energy, center of gravity, velocity and acceleration, curvilinear motion.

MECHANICS (441)

Further study of statics and dynamics, trusses, force systems in space, moment of inertia of areas and bodies, impulse and momentum.

STRENGTH OF MATERIALS (442)

The relationship between stress and strain, the calculation of stresses in machine parts, beams and columns; the use of shear and moment diagrams, the determination of moments of inertia and centers of gravity, and the analysis of the effect of loading on stress distribution. Tests on wood, concrete, plastics and metal on standard testing machines in accordance with A.S.T.M. testing procedures.

HEAT (445)

The principles of temperature and thermometry. Thermal phenomena, expansion of solids, liquids, and gases, the three states of matter, calorimetry, conduction, convection, radiation, properties of air, elementary hydraulics.

METALLURGY (446)

The fundamentals of the physical metallurgy of ferrous and non-ferrous alloys. Investigation of the physical properties of metals. Hardness tests, thermal analysis and grain structure examination.

MECHANICAL MACHINES (448)

Energy equation, perfect gas relations, combustion processes, heat engines, internal-combustion engines, steam-power equipment, laboratory exercises.

MECHANICAL MACHINES (449)

Hydraulics, fluid mechanics, pumps, fans, compressors, refrigeration theory, heat transfer, air conditioning and surveying, laboratory exercises.

QUALITY CONTROL (450)

The use of inspection methods to secure the control of quantity production of complex assemblies. The use of statistical principles in sampling, and the determination of variables and standard quality.

ELECTRICITY (460)

Electrical motors, generators, controls. The elements of electronics and uses of electronic devices in the control of mechanical equipment.

INDUSTRIAL ORGANIZATION (494)

Physical facility requirements, principles of mass production, production planning and control, plant layout, industrial engineering.

CONSTRUCTION TECHNOLOGY

ELECTRICAL EQUIPMENT FOR BUILDINGS (425)

Lighting, control, power requirements for buildings including codes.

MECHANICAL EQUIPMENT FOR BUILDINGS (427)

Elements of heating, air conditioning and ventilating equipment for buildings.

MECHANICAL EQUIPMENT FOR BUILDINGS (428)

Acoustics and plumbing for building, including codes.

ARCHITECTURAL DRAFTING (436, 437)

Isometric and perspective drawings and application to architectural drawing. Preliminary-plan studies, working drawings, details, sections, plot plan.

TOPOGRAPHICAL DRAFTING (438)

Mapping, symbols, profiles, sections, right-of-way maps, contours, grades, and the recording of topographical surveys.

STRUCTURAL DRAWING (439)

Elements of detailing structural members and connections, shop drawings and checking with emphasis on the student's option.

STRENGTH OF MATERIALS (442.1)

The relationship between stress and strain, the calculation of stresses in machine parts, beams and columns; the use of shear and

moment diagrams, the determination of moments of inertia and centers of gravity, and the analysis of the effect of loading on stress distribution. Tests of wood and metal on standard testing machines in accordance with the A.S.T.M. testing procedures.

HYDRAULICS (447)

Elements of fluid machines, fluid pressure, buoyancy, flow in pipes, methods of measurement.

PRINCIPLES OF CONSTRUCTION (468)

Principles of frame and mason construction. The use of standard materials in the construction of homes, public and industrial buildings. Building codes and their application.

STRUCTURAL THEORY (469, 470)

Computation of forces and stresses in static structures. Types of loadings. Roof trusses, cables, arches, loadings, influence lines.

STRUCTURAL DESIGN (471)

Design of typical reinforced concrete and steel structures.

BUILDING DESIGN (472, 473)

Application of theory to actual design, preparation of plans, estimates and specifications. Term project.

CONCRETE (475)

Plain concrete, design, control inspection, testing and curing of concrete mixes.

SURVEYING (476)

The fundamentals of plane surveying, use and care of equipment and instruments, setting lines and grades, note keeping, mapping.

SURVEYING (477)

Land surveying, topographical surveying, deed descriptions.

SURVEYING (477.1)

Route surveying, topographical surveying, deed descriptions, highway curves and earthwork.

ESTIMATING (479, 479.1)

The techniques of cost and material estimating, with practical problems in the student's specialty.

SPECIFICATION WRITING (480, 480.1)

Elements of specification writing with emphasis on the student's specialty. Selection of materials and equipment.

HIGHWAY THEORY (482)

Fundamentals of highway design location, pavement design, drainage, maximum and minimum grades.

HIGHWAY DESIGN (483, 484)

Application of highway theory, sight distances, intersections, curves and earthwork, quantities, mass diagram. Term project.

CONSTRUCTION PLANNING (485)

Construction planning, equipment, and methods.

MATERIALS TESTING (486)

Testings of various highway materials including bituminous materials, pipe and advanced concrete.

SOIL MECHANICS (487)

Elements of the behavior of soils with emphasis on testing procedures.

BUSINESS LAW (558.1)

A basic understanding of courts, legal procedures, and working knowledge of legal principles. Emphasis throughout the study on the fundamental law of contracts and its applications to the construction industry.

BUSINESS ORGANIZATION AND MANAGEMENT (695.3)

Organization of the construction business; planning, scheduling, rate and time keeping, inventory and control. Problems related to the construction business.

AUTOMOTIVE TECHNOLOGY

AUTOMOTIVE SHOP (405, 406)

A study of the automobile engine and chassis including the service procedure for tires, wheels, brakes, steering, differential, headlights, radiator, engines and related parts.

TRANSMISSIONS (407)

Principles of operation of fluid couplings, torque converters, planetary geartrains, servos and multiple-disc clutches. Practice in disassembly, repair, diagnosis, and maintenance of units of various manufacture.

DIAGNOSIS (408)

Diagnosis of the electrical system, engine and component parts, carburetion and fuel systems of the automobile with the use of specialized testing units and diagnosis machines.

DESIGN (AUTOMOTIVE) (435)

The application of standard data to engine transmission and chassis design. Discussion of such topics as gradeability, speed, weight balance, turning radii.

INTERNAL-COMBUSTION ENGINES (451, 452)

Perfect gas laws, working fluids, fundamental energy relations applied to heat engines and internal-combustion engines. The ideal engines, their effect on design and function of actual engines, carburetion, ignition, combustion, volumetric efficiency, engine output. Laboratory exercises emphasizing these functions.

ACCOUNTING (465, 466)

The science of record keeping from the basic definition of terms and fundamental accounting equation through books of original entry, final entry, and trial balance. Numerous practical problems based on each topic. Adjusting, closing the books, worksheets, bad debts, depreciation, general and subsidiary ledgers, accounting practice set.

AUTOMOTIVE ELECTRICITY (459)

A study of the ignition, starting, charging, instrument, and lighting circuits of the modern automobile with laboratory testing of the various electrical components.



MEDICAL OFFICE ASSISTANT

In the field of medicine, always a fascinating one for many young women, a new and interesting career has opened up in the last few years—the Medical Office Assistant.

Broome Technical Community College prepares young women of ability and character for this career by offering specialized training combining secretarial work with clinical laboratory procedures. Experience has shown that intensive courses of instruction in the business field, together with clinical laboratory work, have prepared the graduates for good employment opportunities in physicians' offices, hospital laboratories and record rooms, and related fields.

The Medical Office Assistant must be versatile, fitted by training and personality to work with professional medical people in various ways. In addition to general education, she needs basic knowledge and skills such as typing, medical shorthand, accounting and office procedures. Anatomy, physiology, bacteriology, chemistry, and materia medica are working tools and a base for acquiring the vocabulary of medicine. Routine clinical laboratory procedures in urinalysis, hematology and blood chemistries complete the curriculum.

Graduates, too few to meet the demand, are finding satisfaction, variety, and opportunity in this important phase of medical service.

CURRICULUM OUTLINE

TERM 1

(Fall Term)	Credit Hours
71 Communication Skills ...	3
501 Typewriting	0
504 Shorthand	0
510 Mathematics	3
543 Anatomy and Physiology .	4
560 Chemistry	4
*(See note below)	

TERM 2

(Winter Term)	
78 Communication Skills ...	3
502 Typewriting	2
505 Shorthand	3
511 Mathematics	3
544 Anatomy and Physiology .	3
561 Chemistry	4

TERM 3

(Spring Term)	
73 Communication Skills ...	3
91 Psychology	3
503 Typewriting	2
506 Shorthand	3
545 Clinical Laboratory	4
555 Office Procedure	2

TERM 4

(Fall Term)	Credit Hours
92 Economics	3
507 Transcription	3
540 Accounting	3
546 Clinical Laboratory	4
550 Bacteriology	4

TERM 5

(Winter Term)	
82 First Aid	2
93 Economics	3
508 Medical Shorthand	3
541 Accounting	3
547 Clinical Laboratory	4
551 Bacteriology	4
556 Office Practice	2

TERM 6

(Spring Term)	
74 Communication Skills ...	3
509 Medical Shorthand	3
548 Clinical Laboratory	3
549 Materia Medica	3
552 Pediatrics	2
557 Office Practice and Accounting	2
558 Business Law	3

* Persons who have passed Typewriting and Shorthand will be expected to take Speed Lab for skill maintenance.

MEDICAL OFFICE ASSISTANT

TYPEWRITING (501, 502)

Mastery of the keyboard by touch; operation and care of the typewriter; writing business letters; addressing envelopes; manuscript typing; development of speed.

TYPEWRITING (503)

Continuation of basic skill-building with emphasis on speed and advanced problems. Rough drafts, medical data, manuscripts, legal papers.

SHORTHAND (504, 505)

Principles of the new simplified Gregg Shorthand; reading and writing in shorthand; development of dictation speed.

SHORTHAND (506)

More emphasis on the building of transcription speed. Further drill for dictation speed. Some beginning medical dictation.

TRANSCRIPTION (507)

Development of skill in reading shorthand notes and turning out from them a mailable transcript on the typewriter.

MEDICAL SHORTHAND (508, 509)

Dictation of medical material to be transcribed on the typewriter. Further drives for speed at taking dictation under the same standards described under Shorthand. The building of medical vocabu-

lary which can be taken in shorthand and transcribed accurately on the typewriter. The use of medical dictionaries.

MATHEMATICS (510)

A review of fractions, percentage and proportional problems using medical terminology. Mathematics used in the preparation of solutions and dosages with both metric and apothecaries systems of measuring volume and weight. Ordinary household, metric and apothecaries equivalent measures with applied problems in converting from one system to another, as well as problems in making up hypodermic and oral medications from concentrated solutions, tablets and full-strength drugs.

MATHEMATICS (511)

A review of the fundamental processes with emphasis on short methods and checking accuracy. Common and decimal fractions as used in business. Applied problems in banking, insurance, discounts, partial payments, installment buying, interest, taxes and other common office and household uses of mathematics.

ACCOUNTING (540)

The science of record keeping from the basic definition of terms and the fundamental accounting equation through books of original entry, final entry, and the trial balance. Practical problems based on each topic.

ACCOUNTING (541)

Adjusting, closing the books, worksheet, bad debts, obsolescence, general and subsidiary ledgers. Problems and set.

ANATOMY AND PHYSIOLOGY (543, 544)

The structure and function of the body as an integrated whole.

An overview of the skeletal, muscular, circulatory, respiratory, digestive and nervous systems. Vocabulary building.

CLINICAL LABORATORY (545, 546)

A sequence of courses dealing with the biological processes which go on in living matter, and the practice of clinical techniques employed in doctors' offices and hospital laboratories. Laboratory work in microscopic, qualitative, and quantitative analysis of body fluids both normal and pathological. Special attention to the analysis of urine and blood.

CLINICAL LABORATORY (547, 548)

Hematology: the complete blood count, sedimentation rates, hematocrit, cell indices; coagulation, bleeding and prothrombin time; the blood picture in various diseases, blood grouping and typing.

MATERIA MEDICA (549)

The various classes of commonly used drugs and their effects on the human body. The administration of medicines and the uses of antiseptics and disinfectants.

BACTERIOLOGY (550)

Fundamentals of bacteriology (microbiology) and related micro-organisms and their relation to industry and disease. Laboratory work in the techniques of sterilization, cultivation, and identification of bacteria, yeasts and molds. A microscopic study of parasites of medical interest.

BACTERIOLOGY (551)

Lectures and laboratory work on bacterial physiology, important groups of bacteria, and common organisms of air, water, milk, and soil.

PEDIATRICS (552)

Emphasis on the child as an individual in both health and disease,

from the standpoint of his total well-being from birth to school age. An overview of the common diseases of childhood.

OFFICE PROCEDURE (555)

Some of the practical office procedures used in a physician's office, such as the use of the telephone, sterilization of instruments and gloves, the keeping and filing of patients' records, the general care of the office. Professional ethics.

OFFICE PRACTICE (556)

Basic training in the operation of various types of adding machines, dictating and transcribing equipment. Stencil and spirit duplicating. Experience at alphabetic, numeric, and subject filing.

OFFICE PRACTICE AND ACCOUNTING (557)

Practical use of medical forms used by insurance, workmen's compensation and welfare departments. Practical set of physicians' records.

BUSINESS LAW (558)

A basic understanding of our courts, legal procedures, and a working knowledge of legal procedures. Emphasis on the fundamental law of contracts and its application to sales, bailments, negotiable instruments, agency, insurance, and property.

CHEMISTRY (560, 561)

Taught from the laboratory point of view and adapted to the needs and interests of students of the biological sciences. The fundamental principles and laws of general chemistry. An introduction to the simpler classes of aliphatic and aromatic compounds.

GENERAL EDUCATION

Considerable emphasis is placed on the vocational objectives in all the curriculums. However, the College is equally concerned with the broader objective of well-rounded personal development.

A worker does not function in a vacuum. He works with and for others, makes decisions which affect himself and others, expresses his views, is aware of the value of good health. Outside of working hours he has obligations to his family, takes part in community affairs, and is concerned with the welfare of his country and its relations with other countries.

All of these activities influence his effectiveness as a worker and a member of society. Therefore General Education should be and is an important part of the College instruction.

Communication Skills courses seek to develop an appreciation of language as a means of communication, and facility in the use of the spoken and written word.

A sequence of courses in Economics is concerned with a study of the American economic system.

Psychology gives the students an insight into human nature which will prepare them for acceptable service in the industrial and professional world.

Students in the technology curriculums are given instruction in industrial safety practices and first aid, and an introduction to the rapidly expanding field of industrial and labor relations.

In these non-technical studies and in the varied program of student activities described elsewhere, opportunity is given to develop the skills, knowledge and attitudes for the living of a satisfactory life.

GENERAL EDUCATION

COMMUNICATION SKILLS (71)

The first in a sequence of courses to develop the skills of reading, writing, speaking, and listening. The English language: history, symbolism, context, denotation, connotation, emotive language, report language. Similarities and differences in oral and written English. Presentation of oral and written reports (throughout the sequence).

COMMUNICATION SKILLS (72)

Levels of usage, grammar, and the effective organization of ideas. Emphasis on writing improvement.

COMMUNICATION SKILLS (73)

Development of reading improvement. Business correspondence. Parliamentary procedure. Group discussion.

COMMUNICATION SKILLS (74)

Designed to broaden the student's understanding of our culture by introducing him to some challenging ideas of recognized writers. Through selected readings the student is encouraged to improve the quality of his thinking and to develop his skill of expression by means of class discussions and oral and written reports.

EFFECTIVE SPEAKING (75)

Speech communication through voice, words and action. Voice production, diction, platform presence, organization of ideas. Practice in presenting speeches of different types.

INDUSTRIAL SAFETY AND FIRST AID (81)

Accident sources and causes, safety as a responsibility of workers and management; job safety analysis; education, training, supervision,

and organization for safety; accident reports and records; the principles of first aid as applied to industry.

FIRST AID (82)

The fundamental principles of first aid as outlined by the Standard Red Cross course. Fundamentals of nutrition, including individual differences and requirements.

PSYCHOLOGY (91)

Designed to give the students insight into human nature which will prepare them for acceptable service in employment. Personal development, techniques involved in dealing with people, vocational adjustment and efficiency, intelligence, learning, leadership, and mental hygiene.

ECONOMICS (92)

The American economy. A survey of occupational objectives; professional ethics; fundamental economic principles; standards of living in the United States; production; marketing; forms of business ownership; large-scale business enterprise; prices; monopoly; our national income; distribution of personal income in the United States; money, credit, banking; America's role in international finance.

ECONOMICS (93)

Taxation and public finance; labor-management relations and their effect upon the public; business-cycles; international trade and other international economic relations; how our political policies affect the rest of the world; American democracy and capitalism compared to other political and economic systems; economics of war and peace.

SOCIOLOGY (94)

American society and its activities, including public opinion and propaganda, race relations, education as a social force, the family and modern society, public health, housing, interaction between government and society, recreation and leisure activities, immigration, social change, and social security.

EXTENSION DIVISION

The Extension Division of the college offers both sequential programs and unit courses on a part-time basis to employed persons. Its purpose is to provide opportunity for adults of the community to extend their education in specialized fields.

The sequential programs consist of accredited college-level curriculums in the fields of Chemical, Electrical, Mechanical, Business, and Industrial Management Technology. The Extension Diploma is awarded to those who successfully complete the required curriculums, which consist of approximately thirty-two semester hours. It is expected that the average student can complete these curriculums in three and one-half to four years on the basis of attending classes two evenings a week during each of the two semesters per year. Admission requirements for students in the diploma program are the same as for the day students.

The Extension Division also offers shorter programs and unit courses in Traffic Management, Industrial Purchasing, and other areas where there is an expressed need and where the college can furnish the necessary facilities. Admission requirements for these courses are dependent on each individual course as outlined in the Extension Division announcement.

The cost of tuition, books and supplies for a student taking a typical diploma program is approximately \$100 per year (two terms). Most programs are approved by the Veterans Administration. Applicants wishing to obtain veteran's educational benefits should consult their nearest veterans' agency.

For further information or announcement of courses contact the Director of Extension, Broome Technical Community College.

PRE-TECHNICAL PROGRAM

(Extension Division)

College officials are increasingly aware that a large number of high school graduates with average or better inherent ability have failed to properly prepare themselves for continuation of their education. As a community college, Broome Tech feels an obligation to give such young people a better foundation for higher education in a one-year Pre-Technical program offered through the Extension Division.

Observation and experience indicate that they are weak in the following fields, regardless of their vocational interest:

1. Reading—speed and comprehension
2. Writing—grammar, spelling
3. Mathematics—lack of practice in the use of even simple arithmetic and algebra
4. Basic sciences—physics, chemistry

The curriculum is designed to strengthen the students' background in these areas so that they may enter the full-time day program with a better expectation of successful accomplishment. In addition to the courses mentioned, shop, and engineering drawing are given. Successful completion of this work may lighten the load of the first year of the regular program, permitting time for concentration on the more time-consuming courses.

Students are admitted to the program on the basis of general intelligence and vocational interest tests, rather than on high school academic record. The Pre-Technical program, offered in the college atmosphere and with the performance of the regular students as a stimulus, should provide for many young people the foundation to develop their potential in a full academic curriculum.

CURRICULUM OUTLINE

Pre-Technical

TERM 1

(Fall Term)

8068	English
8010	Elements of Technical Mathematics
8020	Elements of Technical Physics
8024	Elements of Chemistry
8430	Drawing

TERM 2

(Winter Term)

8069	English
8011	Elements of Technical Mathematics
8021	Elements of Technical Physics
8025	Elements of Chemistry
8431	Drawing

TERM 3

(Spring Term)

8070	English
8012	Elements of Technical Mathematics
8022	Elements of Technical Physics
8026	Elements of Chemistry
8400	Shop

ELEMENTS OF TECHNICAL MATHEMATICS **(8010, 8011, 8012)**

A three-term sequence of courses covering the following fields of work: arithmetic and the use of the slide rule in the solution of problems commonly encountered in scientific fields, algebra through quadratic equations, logarithms, trigonometry. Recitations and supervised study.

ELEMENTS OF TECHNICAL PHYSICS **(8020, 8021, 8022)**

Basic physics including the introduction to mechanics, heat, sound, electricity, and light, as well as the study of properties of matter. Related laboratory work.

ELEMENTS OF CHEMISTRY (8024, 8025, 8026)

A first program in chemistry, stressing basic principles and theories which will enable the student to meet the science entrance requirements of the college.

DRAWING (8430, 8431)

See Engineering Drawing (430, 431) under Mechanical Technology.

SHOP (8400)

See Shop (400) under Mechanical Technology.

ENGLISH (8068, 8069, 8070)

A three-term sequence of courses designed to improve the student's mastery of language. Concentration on grammar, spelling, punctuation, and the organization of ideas for effective expository writing. Development of reading skills: speed, comprehension, vocabulary building.

STATE UNIVERSITY OF NEW YORK

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Broome Technical Community College is
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LUCILLE SNOPEK	Departmental Secretary

REQUEST FOR APPLICATION FOR ADMISSION

Mail to

Director of Admissions
Broome Technical Community College
Binghamton, New York

.....

NAME

ADDRESS

HIGH SCHOOL

I am interested in the curriculum checked below:

- Automotive Technology
- Business Technology
- Chemical Technology
- Construction Technology
- Dental Hygiene
- Electrical Technology
- Mechanical Technology
- Medical Office Assistant

Please send the Evening Division Catalog

STATE UNIVERSITY OF NEW YORK

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HARPUR COLLEGE AT ENDICOTT

MEDICAL COLLEGES

STATE UNIVERSITY DOWNSTATE MEDICAL CENTER IN NEW YORK CITY

STATE UNIVERSITY UPSTATE MEDICAL CENTER IN SYRACUSE

TEACHERS COLLEGES

STATE UNIVERSITY COLLEGE FOR TEACHERS AT ALBANY

STATE UNIVERSITY TEACHERS COLLEGE AT BROCKPORT

STATE UNIVERSITY COLLEGE FOR TEACHERS AT BUFFALO

STATE UNIVERSITY TEACHERS COLLEGE AT CORTLAND

STATE UNIVERSITY TEACHERS COLLEGE AT FREDONIA

STATE UNIVERSITY TEACHERS COLLEGE AT GENESEO

STATE UNIVERSITY TEACHERS COLLEGE AT NEW PALTZ

STATE UNIVERSITY TEACHERS COLLEGE AT ONEONTA

STATE UNIVERSITY TEACHERS COLLEGE AT OSWEGO

STATE UNIVERSITY COLLEGE ON LONG ISLAND AT OYSTER BAY

STATE UNIVERSITY TEACHERS COLLEGE AT PLATTSBURGH

STATE UNIVERSITY TEACHERS COLLEGE AT POTSDAM

OTHER PROFESSIONAL COLLEGES

STATE UNIVERSITY COLLEGE OF FORESTRY AT SYRACUSE UNIVERSITY

STATE UNIVERSITY MARITIME COLLEGE AT FORT SCHUYLER

STATE UNIVERSITY COLLEGE OF CERAMICS AT ALFRED UNIVERSITY

NEW YORK STATE COLLEGE OF AGRICULTURE AT CORNELL UNIVERSITY

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STATE UNIVERSITY AGRICULTURAL AND TECHNICAL INSTITUTE AT DELHI

STATE UNIVERSITY AGRICULTURAL AND TECHNICAL INSTITUTE AT FARMINGDALE

STATE UNIVERSITY AGRICULTURAL AND TECHNICAL INSTITUTE AT MORRISVILLE

COMMUNITY COLLEGES

(Locally-sponsored two-year colleges under the program of State University)

AUBURN COMMUNITY COLLEGE AT AUBURN

BRONX COMMUNITY COLLEGE AT NEW YORK CITY

BROOME TECHNICAL COMMUNITY COLLEGE AT BINGHAMTON

CORNING COMMUNITY COLLEGE AT CORNING

ERIE COUNTY TECHNICAL INSTITUTE AT BUFFALO

FASHION INSTITUTE OF TECHNOLOGY AT NEW YORK CITY

HUDSON VALLEY TECHNICAL INSTITUTE AT TROY

JAMESTOWN COMMUNITY COLLEGE AT JAMESTOWN

MOHAWK VALLEY TECHNICAL INSTITUTE AT UTICA

NEW YORK CITY COMMUNITY COLLEGE OF APPLIED ARTS AND SCIENCES

ORANGE COUNTY COMMUNITY COLLEGE AT MIDDLETOWN

STATEN ISLAND COMMUNITY COLLEGE AT STATEN ISLAND

WESTCHESTER COMMUNITY COLLEGE AT WHITE PLAINS

